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EXAMINER	
BELLO, AGUSTIN	

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte THOMAS W. STONE

Appeal 2009-003,186
Application 10/700,828
Technology Center 2600

Decided: November 3, 2009

Before ROBERT E. NAPPI, MARC S. HOFF, and
KARL EASTHOM, *Administrative Patent Judges*.

NAPPI, *Administrative Patent Judge.*

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134(a) of the final rejection of claims 1-5 and 7-17.[1] We have jurisdiction under 35 U.S.C. § 6(b).

We affirm the Examiner's rejection of these claims.

INVENTION

The invention is directed to an optical switching/routing system that uses routing components and selectable switching in order to overcome problems associated with current optical switching systems. *See* Spec. 1-6. Claim 1 is representative of the invention and reproduced below:

> 1. A method for optically switching/routing comprising the steps of:
>
> separating input optical radiation into distinct input channels;
>
> selecting desired distinct output channels;
>
> propagating said distinct input channels through a selectable grating based switching/routing sub-system, the selectable grating based switching/routing sub-system comprising at least one pixellated switchable component, in order to direct said distinct input channels to desired distinct output channels;
>
> recombining said desired distinct output channels.

REFERENCES

Doerr	US 6,956,987 B2	Oct. 18, 2005 (filed Aug. 26, 2004)

[1] Claim 6 was cancelled in an Amendment after Non-Final, filed January 17, 2007. Claim 18 was cancelled in an Amendment after Final filed June 18, 2007. Claims 19-21 were indicated as allowable in the Final Rejection mailed April 18, 2007.

Volodin	US 7,031,573 B2	April 18, 2006 (filed Jul. 1, 2005)

REJECTIONS AT ISSUE

The Examiner rejected claims 1-5 and 7-17 under 35 U.S.C. § 103(a) as being unpatentable over Doerr in view of Volodin. Ans. 3-6.

ISSUE

Rejection of claims 1-5 and 7-17 under 35 U.S.C. § 103(a) as being unpatentable over Doerr in view of Volodin

Appellant argues on pages 9-34 of the Appeal Brief that the Examiner's rejection of claims 1-5 and 7-17 is in error. Appellant argues that there is no motivation to combine Doerr with Volodin. App. Br. 9-34.

Thus, with respect to claims 1-5 and 7-17, Appellant's contentions provide us with the issue: Has Appellant shown that the Examiner erred in combining Doerr with Volodin?

FINDINGS OF FACT (FF)

Doerr

1. Doerr discloses a method and apparatus wherein optical signals are selectively blocked or passed by selectively positioning an opaque or reflective shutter in or out of the light path. Col. 2, ll. 25-28.
2. The opaque shutters can also be replaced by mirrors as embodied in a micromachine mirror array 750. Col. 5, ll. 1-11 and Fig. 7.

Volodin

3. Volodin discloses a free-space optical add-drop multiplexer (OADM) 1000 that includes a transmissive volume Bragg grating (VBG) element. Col. 2, ll. 37-39, col. 8, ll. 61-67, and Fig. 10.
4. The VBG element reflects, i.e., routes, light having a particular wavelength to an optical receiver (fiber) and is transparent to light with other wavelengths which allows the light to be routed to a different optical receiver (fiber). Col. 8, l. 66 through col. 9, l. 21.

PRINCIPLES OF LAW

On the issue of obviousness, the Supreme Court has stated that "[t]he combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results." *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 416 (2007).

"[W]hen the question is whether a patent claiming the combination of elements of prior art is obvious," the answer depends on "whether the improvement is more than the predictable use of prior art elements according to their established functions." *Id.* at 417.

The Examiner bears the initial burden of presenting a prima facie case of obviousness, and Appellant has the burden of presenting a rebuttal to the prima facie case. *In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992). Appellant has the burden, on appeal to the Board, to demonstrate error in the Examiner's position. *See In re Kahn*, 441 F.3d 977, 985-86 (Fed. Cir. 2006).

ANALYSIS

Rejection of claims 1-5 and 7-17 under 35 U.S.C. § 103(a) as being unpatentable over Doerr in view of Volodin

Appellant's arguments have not persuaded us of error in the Examiner's rejection of claims 1-5 and 7-17. Appellant argues that there is no motivation to combine Doerr with Volodin because the Examiner's motivation to combine the references is nothing more than an unsupported statement. App. Br. 14. However, as stated by the Supreme Court, a motivation to combine the references is seen as "helpful insight," *KSR*, 550 U.S. at 418, but is not required as long as the combination of the elements of the references yield predictable results. *Id.* at 416-419.

Doerr discloses a planar lightwave wavelength blocker that uses micromachine mirror arrays to route multi-wavelength optical signals. FF 1-2. Volodin discloses a volume Bragg grating (VBG) that is used to reflect, i.e., or route, a particular wavelength of light to one optical receiver and be transparent to other wavelengths of light in order to route the light to a different optical receiver. FF 3-4. Both devices thus route wavelengths of light; Doerr's device uses mirrors, and Volodin's device uses a grating. Therefore, we consider using Volodin's VGB element in place of Doerr's micro-machine mirror array as nothing more than using a known device to perform its known function of routing light signals. As such, we find that the combination of Doerr with Volodin yields the predictable result of the different wavelengths of light being routed to different optical receivers and we are not persuaded by Appellant's arguments.

Further, even if a motivation identified by the references were required, the Examiner has provided a motivation to combine the references.

Ans. 4. The Examiner stated that the combination of Doerr with Volodin would "provide optical transparency for a wide range of wavelengths, provide excellent longevity, outstanding thermal stability, good dynamic range, excellent optical quality, low cost, a variety of shapes, and refractive index isotropy." Ans. 4 (quoting Volodin col. 4, ll. 59-67). Appellant argues that the Examiner's motivation is an unsupported statement based on hindsight and Examiner's own personal opinion and is not found within any of the references. App. Br. 14-15. However, the Examiner has pointed to a specific portion of the Volodin reference where the motivation to combine the references is found. Ans. 4. Therefore, we find that the Examiner has established a prima facie case of obviousness. The burden shifts to Appellant to rebut the prima facie case of obviousness by demonstrating error. *In re Oetiker*, 977 F.2d at 1445; *In re Kahn*, 441 F.3d at 985-86. Appellant does not provide any further evidence to prove that the Examiner's motivation to combine the references is in error. As a result, Appellant's arguments are not found to be persuasive.

As such, for the reasons stated above, we sustain the Examiner's rejection of claims 1-5 and 7-17.

CONCLUSIONS OF LAW

Appellant has not shown that the Examiner erred in combining Doerr with Volodin.

SUMMARY

The Examiner's rejection of claims 1-5 and 7-17 is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a).

AFFIRMED

ELD

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